Premium Zentec Hybrid Air Capsulate
Premium Iron Filter - Sulphur Filter
Installation Manual

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EXCALIBUR PREMIUM IRON FILTER - SULPHUR FILTER INSTALLATION MANUAL

INSTALLATION PROCEDURES:

The Premium Iron Filter - Sulphur Filter control valve, fittings and chemical free bypass are designed to accommodate minor plumbing misalignments.

Do not use Vaseline, oils, hydrocarbon lubricants or spray silicone on the Premium Iron Filter - Sulphur Filter. A silicon lubricant may be used on back o rings of the Premium Iron Filter - Sulphur Filter but not necessary. Avoid any type of lubricants, including silicone on the Premium Iron Filter - Sulphur Filter red or clear lip seals.

The Premium Iron Filter - Sulphur Filter nuts and caps are designed to be unscrewed or tightened by hand or with the special Premium Iron Filter - Sulphur Filter wrench if necessary. Pliers can be used on the Premium Iron Filter - Sulphur Filter control valve to unscrew the nut or cap. Do not use a pipe wrench to tighten or loosen Premium Iron Filter - Sulphur Filter control valve nuts or caps. Do not place screwdriver in slots on caps and/or tap with a hammer on the Premium Iron Filter - Sulphur Filter control valve.

Do not use pipe dope or other sealants on Premium Iron Filter - Sulphur Filter threads. Teflon tape must be used on the Premium Iron Filter - Sulphur Filter control valve threads of the 1” NPT elbow or ¼” NPT connection and on the threads for the Premium Iron Filter - Sulphur Filter drain line connection. Teflon tape is not necessary on

the Premium Iron Filter - Sulphur Filter nut connection or caps because of o-ring seals.
All plumbing should be done in accordance with local plumbing codes. The pipe size for Premium Iron Filter - Sulphur Filter drain line should be a minimum of ½ inch. When the backwash flow rates for the Premium Iron Filter - Sulphur Filter in excess of 7 GPM or length in excess of 20 feet this now requires a ¾ inch drain line.

Solder joints near the Premium Iron Filter - Sulphur Filter drain must be done prior to connecting the Premium Iron Filter - Sulphur Filter drain line flow control fitting. Leave at least 6 inches between the Premium Iron Filter - Sulphur Filter drain line control fittings and solder joints when soldering pipes that are connected on the Premium Iron Filter - Sulphur Filter drain line control fitting. Failure to do this could cause interior damage to the Premium Iron Filter - Sulphur Filter control valve drain line flow control fitting.

When assembling the installation/fitting package for the Premium Iron Filter - Sulphur Filter (inlet and outlet) connect the fitting to the plumbing system first and then attach the nut, split ring or o ring from the Premium Iron Filter - Sulphur Filter control valve. Heat from soldering or solvent cements may damage the Premium Iron Filter - Sulphur Filter nut, split ring or o ring. The solder joints should be cool and solvent cements should be set before installing the Premium Iron Filter - Sulphur Filter control valve nut, split ring and o ring. Avoid getting primer and solvent cement on the Premium Iron Filter - Sulphur Filter control valve on any part of the o rings, split rings, bypass valve or control valve.

Premium Iron Filter - Sulphur Filter to be plugged into an electrical outlet. All electrical connections must be connected in accordance with local electrical codes.

<u>INSTALLING FITTING ASSEMBLIES:</u>
Premium Iron Filter - Sulphur Filter control valve installation fittings connect to the Premium Iron Filter - Sulphur Filter control valve or the bypass valve using nuts that only require hand tightening. Hand tighten Premium Iron Filter - Sulphur Filter nut connections between Premium Iron Filter - Sulphur Filter control valve and installation fittings, Premium Iron Filter - Sulphur Filter control valve and bypass

valve and bypass valve and installation fittings allows for easy serviceability. Do not use a pipe wrench to tighten Premium Iron Filter - Sulphur Filter nuts on installation fittings. Hand tighten only. Premium Iron Filter - Sulphur Filter split ring retainer holds the nut on and allows load to be spread over the entire nut surface area reducing the chance for leakage with the Premium Iron Filter - Sulphur Filter. The split ring design, incorporated into the Premium Iron Filter - Sulphur Filter installation fittings allows approximately 2 degrees off axis alignment to the plumbing system. The Premium Iron Filter - Sulphur Filter installation fittings are designed to accommodate minor plumbing misalignments.

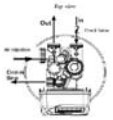
Premium Iron Filter - Sulphur Filter control valve slip the nut onto the fitting first, then the split ring second and the o ring last. Hand tighten the Premium Iron Filter - Sulphur Filter nut. If the fitting is leaking, tightening the nut will not stop the leak. Remove the Premium Iron Filter - Sulphur Filter nut, fitting and check for damage or misalignment of the o ring.

BYPASS VALVE:

The Premium Iron Filter - Sulphur Filter bypass valve easily connects to the Premium Iron Filter - Sulphur Filter control valve body using nuts that only require hand tightening. Hand tighten nut connections between Premium Iron Filter - Sulphur Filter control valve and fittings, Premium Iron Filter - Sulphur Filter control valve and bypass valve Premium Iron Filter - Sulphur Filter and installation fittings allow for easy serviceability. On Premium Iron Filter - Sulphur Filter do not use Vaseline, oils or other unacceptable lubricants on o- rings. A silicon lubricant may be used on Premium Iron Filter - Sulphur Filter black o rings. All seals are self lubricating EPDM for long life lubricating qualities.

Check Valve Installation

The one way Premium Iron Filter - Sulphur Filter check valve supplied with the Iron Filter - Sulphur Filter must be installed on the raw water supply feed line prior to entering the Premium Iron Filter - Sulphur Filter.



Programming Set Up Premium Iron Filter - Sulphur Filter

On the Premium Iron Filter - Sulphur Filter press next and ▼ buttons simultaneously for 3 seconds and release to take go to the Premium Iron Filter - Sulphur Filter regeneration and cycle times set up screens.

Step 1:
The first Premium Iron Filter - Sulphur Filter set up stage will have a arrow pointing to the SET on the top left and the display on the digital board should read “Soft”. Press the Premium Iron Filter - Sulphur Filter next button to go to step 2.

Step 2:
On the Premium Iron Filter - Sulphur Filter next setting will have an arrow pointing to the SET at the top left with another arrow pointing to Premium Iron Filter - Sulphur Filter backwash. This cycle time is to be set for 10 minutes. Press the Premium Iron Filter - Sulphur Filter next button for step 3.

Step 3:
On the Iron Filter - Sulphur Filter next setting will have an arrow pointing to the SET on the top left with another arrow pointing to the Premium Iron Filter - Sulphur Filter Draw. This cycle time is to be set for 40 minutes. Press the next button to go to step 4.

Step 4:
On the Iron Filter - Sulphur Filter next setting will have an arrow pointing to the SET on the top left with another arrow pointing to the backwash. This is a second backwash which is not required on the Iron Filter - Sulphur Filter filter and should be set to “OFF”. Press the next button to go to step 5.

Step 5:
On the Iron Filter - Sulphur Filter next setting will have an arrow pointing to the SET on the top left with another arrow pointing to the rinse. This is a rinse cycle which is not required on the Iron Filter - Sulphur Filter filter and should be set to “OFF”. Press the next button to go to step 6.

Step 6:
On the Iron Filter - Sulphur Filter next setting will have an arrow pointing to the SET on the top left with another arrow pointing to the fill. This is a fill cycle which is not required on the Premium Iron Filter - Sulphur Filter and should be set to “OFF”. Press the Premium Iron Filter - Sulphur Filter next button to go to exit and return to time.

Excalibur Water Systems Iron Filter - Sulphur Filter Programming Procedures:

General Operation:
When the Premium Iron Filter - Sulphur Filter is filtering on two displays of the Premium Iron Filter - Sulphur Filter two displays will be shown, time of day or days until the next regeneration of the Premium Iron Filter - Sulphur Filter. When pressing up or down on the Premium Iron Filter - Sulphur Filter will toggle between the two choices.

To set time of day:
When the Premium Iron Filter - Sulphur Filter has a power outage longer than 8 hours or a power surge the time of day will flash indicating it requires to be reset. All other information for the Premium Iron Filter - Sulphur Filter will be stored in memory no matter how long the Premium Iron Filter - Sulphur Filter has a power outage. To set the time of day push and hold the ▲ or ▼ arrow until the SET indicator is displayed, and the house flashes. Press the Premium Iron Filter - Sulphur Filter ▲ or ▼ button until the correct hour of day is displayed. Press the next button and the minutes to be set will flash. Use the ▲ or ▼ button to correctly set the minutes to the proper time of day. Press the Premium Iron Filter - Sulphur Filter next button to return to the main screen.

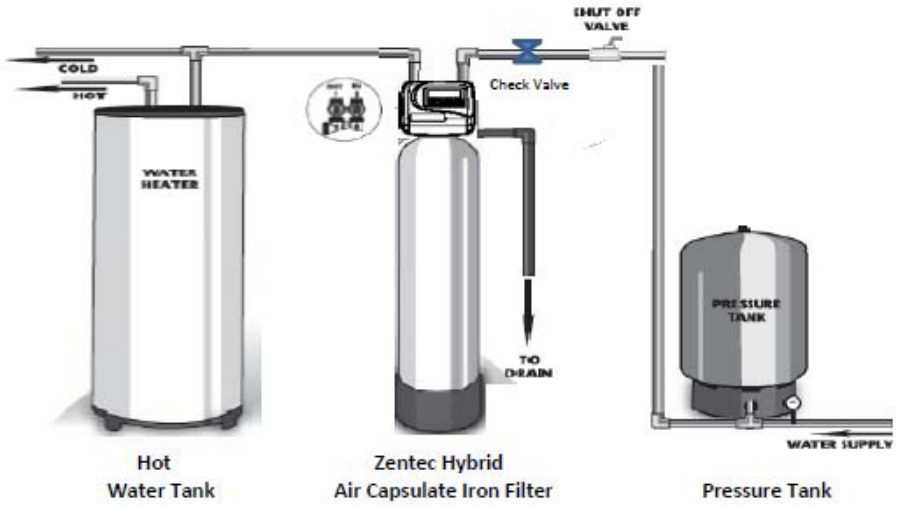
The user can initiate manual regeneration of the Premium Iron Filter - Sulphur Filter Filter. The user has the option to request Premium Iron Filter - Sulphur Filter to have manual at the delayed regeneration time for the Premium Iron Filter - Sulphur Filter or have the regeneration occur immediately for the Premium Iron Filter - Sulphur Filter. On the

Premium Iron Filter - Sulphur Filter simultaneously press the up and down buttons on the Premium Iron Filter - Sulphur Filter to start regeneration at the next delayed regeneration time. If the Premium Iron Filter - Sulphur Filter regeneration is to occur today, an arrow will point to regeneration on the Premium Iron Filter - Sulphur Filter. For immediate regeneration simultaneously press and hold the REGEN button for 3 seconds on the Premium Iron Filter - Sulphur Filter.

When the Premium Iron Filter - Sulphur Filter is in regeneration, step through the different regeneration cycles by pressing the Regen button on the Premium Iron Filter - Sulphur Filter until complete and back to present time of day.

User please note:
Do not attempt to go further into Premium Iron Filter - Sulphur Filter programming other than time of day or regeneration on the Premium Iron Filter - Sulphur Filter unless you have a full and comprehensive understanding of the Premium Iron Filter - Sulphur Filter programming and all features. Incorrect settings on the Premium Iron Filter - Sulphur Filter may result in a labour service charge.

Excalibur Water Systems Zentec Hybrid
AIR CAPSULATE INSTALLATION DIAGRAM



EXCALIBUR WATER SYSTEMS
Premium Iron Filter - Sulphur Filter
Troubleshooting Guide

Problem	Possible Cause	Solution
1. Timer does not display time of day	a. Transformer unplugged	a. Connect power
	b. No electric power at outlet	b. Repair outlet or use working outlet
	c. Defective transformer	c. Replace transformer
	d. Defective PC board	d. Replace PC board
2. Timer does not display correct time of day	a. Switched outlet	a. Use uninterrupted outlet
	b. Power outage	b. Reset time of day
	c. Defective PC Board	c. Replace PC board
3. Control valve regenerates at wrong time of day	a. Power outages	a. Reset control valve to correct time of day
	b. Time of day not set correctly	b. Reset to correct time of day
	c. Time of regeneration incorrect	c. Reset regeneration time
4. E1, E2 or E3 E1-Unable to recognize start of regeneration E2-Unexpected stall E3-Motor ran to long, timed out trying to reach the next cycle position or trying to reach home position	a. Control valve has just been serviced	a. Press SET HOUR and DOWN for 3 seconds or unplug power source jack (black wire) from the circuit board and plug back in to reset control valve
	b. Foreign matter is lodged in control valve	b. Check piston and spacer stack assembly for foreign matter
	c. High drive forces on piston	c. Replace piston(s) and spacer stack assembly
	d. Control valve piston not in home position	d. Press SET HOUR and DOWN for 3 seconds or unplug power source jack (black wire) from the circuit board and plug back into reset control valve
	e. Motor not inserted fully to engage pinion, motor wires broken or disconnected, motor failure	e. Check motor and wiring. Replace motor if necessary
	f. Drive gear label dirty or damaged, missing or broken gear	f. Replace or clean drive gear
	g. Drive bracket incorrectly aligned to back plate	g. Reset drive bracket properly
	h. PC board is damaged or defective	h. Replace PC board
	i. PC board incorrectly aligned to drive bracket	i. Ensure PC board is correctly snapped on to drive bracket
5. Control Valve stalled in regeneration	a. Motor not operating	a. Replace motor
	b. No electric power at outlet	b. Repair outlet or use working outlet
	c. Defective transformer	c. Replace transformer
	d. Defective PC board	d. Replace PC board
	e. Broken drive gear or drive cap assembly	e. Replace drive gear or drive cap assembly
	f. Broken piston retainer	f. Replace drive cap assembly
	g. Broken main or regenerant piston	g. Replace main or regenerant piston

6. Control valve does not regenerate	a. Transformer unplugged	a. Connect transformer
	b. No electric power at outlet	b. Repair outlet or use working outlet
automatically when	c. Broken drive gear or drive cap assembly	c. Replace drive gear or drive cap assembly
UP and DOWN buttons are depressed and held	d. Defective PC board	d. Replace PC board
7. Control valve does not regenerate	a. Defective PC board	a. Replace PC board
	b. Set-up error	b. Check control valve set-up procedure
automatically but does when UP and DOWN buttons are depressed		
8. Too much air in water (cloudy small air bubbles)		a. Check air – off tank. Risers in place
		b. Braukman valve on.
		c. check braukman valve internals – clean debris etc. out
		d. too much draw on intake (micronizer) adjust to 30% draw of pump cycle.
9. Smell and/or Iron Filter bleeding thru		a. Check programming
		b. Air injection set properly
		c. Size of equipment correct
10. Smell **Hot** side only		a. Chlorinate hot tank
		b. Optional to remove anode rod.
		c. If condition persists check for sulphur reducing bacteria
		a. Unit backwashed thoroughly at install. (backwash now)
11. Black or Grey water (cold side)		b. Check backwash control
		c. Plugged backwash control
		d. Kinked drain line
12. Excessive noise during backwash		a. Fasten all lines
13. No air getting drawn into water		a. Check micronizer adjustments
		b. Not enough flow (check pump flow rate)
		c. Plugged air intake
		d. Pressure settings should be at 30-50 no higher.
		e. (lower the pressure – increase flow)
14. Particles in water (Media-Black)		
		a. Broken distributor or riser tube.

20 YEAR WARRANTY
Lifetime Tank Warranty
Premium Iron Filter - Sulphur Filter

Thank you for your purchase of our PREMIUM IRON FILTER - SULPHUR FILTER. For proof of purchase, please retain your Invoice/Sales Order Copy.

Warranty ~ Offered
Excalibur Water Systems warranties its products to be free from defect in materials and workmanship to the original owner from the date on the proof of purchase as described below.

Warranty ~ Working Procedures
If during the suitable warranty period, a part is defective, then Excalibur Water Systems will repair or replace that part at no charge to the original owner, with the exception of charges for nominal shipping, service and/or installation.

Warranty ~ Coverage Outlined
Excalibur Water Systems guarantees, to the original owner, a period of 20 years, the VALVE BODY to be free of defects in materials and workmanship and to perform its proper functions. To the original owner, a period of 20 years, the ELECTRONIC CONTROL VALVE as well as all parts to be free of defects in materials and workmanship and to perform their normal functions. To the original owner, the MINERAL TANK will not rust, corrode, leak, burst or in any other form fail to perform their proper functions for a LIFETIME period of 20 YEARS.

Warranty ~ Service
In the event you require service, your local Excalibur Water Systems Dealer will provide all necessary service and installation for your Premium Iron Filter - Sulphur Filter. To obtain warranty service within 30 days of discovery of the defect, notification must be given to your local Excalibur Water Systems Dealer.

General Provisions
The above warranties are effective provided the PREMIUM IRON FILTER - SULPHUR FILTER is operated at water pressures not exceeding 125psi and at water temperatures not exceeding 120°F; also provided that the Iron Filter - Sulphur Filter is not subject to abuse, misuse, alteration, neglect, freezing, accident or negligence; and provided further that the Iron Filter - Sulphur Filter is not damaged as the result of any unusual force of nature such as, but not limited to flood, hurricane, tornado or earthquake. Excalibur Water Systems is excused if failure to perform its warranty obligations is the result of strikes, government regulation, materials shortages or other circumstances beyond its control.
THERE ARE NO WARRANTIES ON THE IRON FILTER - SULPHUR FILTER BEYOND THOSE SPECIFICALLY DESCRIBED ABOVE. ALL IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, ARE DISCLAIMED TO THE EXTENT THEY MIGHT EXTEND BEYOND THE ABOVE PERIODS. THE SOLE OBLIGATION OF EXCALIBUR WATER SYSTEMS UNDER THESE WARRANTIES IS TO REPLACE OR REPAIR THE COMPONENT OR PART PROVES TO BE DFEFECTIVE WITHIN THE SPECIFIED TIME PERIOD AND EXCALIBUR WATER SYSTEMS IS NOT LIABLE FOR CONSEQUENTIAL OR INDIDENTAL DAMAGES. NO DEALER, AGENT, REPRESENTATIVE OR OTHER PERSON IS AUTHORIZED TO EXTEND OR EXPAND THE WARRANTIES EXPRESSED ABOVE.

Certain provinces or states do not allow limitations on how long an implied warranty lasts or exclusions or limitations of incidental or consequential damage, therefore limitations and exclusions in this warranty may not apply to you. This warranty extends you specific legal rights as you may have other rights which vary from province to province or state to state.

Excalibur Water Systems is a manufacturer of water treatment products.

Barrie, ON
Canada

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